

Subpart C—Power Sources and Distribution Systems

§ 183.310 Power sources.

(a)(1) Each vessel that relies on electricity to power the following loads must be arranged so that the loads can be energized from two sources of electricity:

- (i) The vital systems listed in § 182.710 of this chapter;
- (ii) Interior lighting except for decorative lights;
- (iii) Communication systems including a public address system required under § 184.610 of this chapter; and
- (iv) Navigation equipment and lights.

(2) A vessel with batteries of adequate capacity to supply the loads specified in paragraph (a)(1) of this section for three hours, and a generator or alternator driven by a propulsion engine, complies with the requirement in paragraph (a)(1) of this section.

(b) Where a ship service generator driven by a propulsion engine is used as a source of electrical power, a vessel speed change, throttle movement or change in direction of the propeller shaft rotation must not interrupt power to any of the loads specified in paragraph (a)(1) of this section.

§ 183.320 Generators and motors.

(a) Each generator and motor must be:

(1) In a location that is accessible, adequately ventilated, and as dry as practicable; and

(2) Mounted above the bilges to avoid damage by splash and to avoid contact with low lying vapors.

(b) Each generator and motor must be designed for an ambient temperature of 50 °C (122 °F) except that:

(1) If the ambient temperature in the space where a generator or motor will be located will not exceed 40 °C (104 °F) under normal operating conditions, the generator or motor may be designed for an ambient temperature of 40 °C (104 °F); and

(2) A generator or motor designed for 40 °C (104 °F) may be used in 50 °C (122 °F) ambient locations provided the generator or motor is derated to 80 percent of the full load rating, and the rating or setting of the overcurrent devices is reduced accordingly.

(c) A voltmeter and an ammeter, which can be used for measuring voltage and current of a generator that is in operation, must be provided for a generator rated at 50 volts or more. For each alternating current generator, a means for measuring frequency must also be provided.

(d) Each generator must have a nameplate attached to it containing the information required by Article 445 of NFPA 70 (incorporated by reference; see 46 CFR 175.600), and for a generator derated in accordance with paragraph (b)(2) of this section, the derated capacity.

(e) Each motor must have a nameplate attached to it containing the information required by Article 430 of NFPA 70, and for a motor derated in accordance with paragraph (b)(2) of this section, the derated capacity.

(f) Each generator must be protected by an overcurrent device set value not exceeding 115 percent of the generator full load rating.

[CGD 85–080, 61 FR 997, Jan. 10, 1996, as amended by USCG–2003–16630, 73 FR 65209, Oct. 31, 2008]

§ 183.322 Multiple generators.

When a vessel is equipped with two or more generators to supply ship's service power, the following requirements must be met:

(a) Each generator must have an independent prime mover; and

(b) The generator circuit breakers must be interlocked to prevent the generators from being simultaneously connected to the switchboard, except for the circuit breakers of a generator operated in parallel with another generator when the installation meets §§ 111.12–11(f) and 111.30–25(d) in subchapter J of this chapter.

§ 183.324 Dual voltage generators.

(a) A dual voltage generator installed on a vessel shall be of the grounded type, where:

(1) The neutral of a dual voltage system must be solidly connected at the switchboard's neutral bus; and

(2) The neutral bus shall be connected to ground.

(b) The neutral of a dual voltage system must be accessible for checking